**GENERAL EDUCATION REQUIREMENTS (36-38 Units)**

### English Composition
- ENGL 101 or 107 ............................................................. 3
- ENGL 102 or 108 ............................................................. 3
- Or
- ENGL 109H ...................................................................... 3

### Foundation Mathematics
- MATH 122A/B OR 125 OR MATH 119A* (F, S, SS) …….3-5 __
  * MATH 119A is not a pre-requisite for MATH 129

### Second Language
2nd semester proficiency by credit or exam required ......

### Intro. to General Education
- UNIV 101 …………………………………………………………………… 1 __

### Exploring Perspectives (4 courses, 12 units)
- Artist ................................................................. 3
- Humanist ............................................................ 3
- Natural Scientist .................................................. 3
- Social Scientist .................................................... 3

### Building Connections (3 courses, 9 units)
- Course One ............................................................ 3
- Course Two ............................................................ 3
- Course Three ........................................................ 3

### General Education Capstone
- UNIV 301 …………………………………………………………………… 1 __

**MCB FOUNDATION COURSES (27 Units)**

### Chemistry (General & Organic Chemistry, with labs)
- CHEM 141/143 OR 151 OR 161/163 .................4 __
- CHEM 142/144 OR 152 OR 162/164 .................4 __
- CHEM 241A & 243A (F, S, SS)* ....................3 __ 1 __
- CHEM 241B & 243B (F, S, SS)* ....................3 __ 1 __
  * Calculated into major GPA

### Mathematics (Calculus II or Biostatistics)
- MATH 129 OR MATH 263 (F, S, SS)............. 3 __
  * MATH 119A is not a pre-requisite for MATH 129

### Physics (Introductory Physics)
- PHYS 102/181 OR 141 OR 161H (F, S, SS) ..........3 __ 1 __ or 4 __
- PHYS 103/182 OR 241 OR 261H (F, S, SS) ............3 __ 1 __ or 4 __

**MCB MAJOR (39 Unit Minimum)**

### Core Requirements (21 units)
- MCB 195 or 295 – MCB Colloquia (F, S).................... 1 __
- MCB 181R - Introductory Biology I (F, S) ............... 3 __
- MCB 181L - Introductory Biology I Lab (F, S) ........... 1 __
- ECOL 182R - Introductory Biology II (F, S) ............. 3 __
- ECOL 182L - Introductory Biology II Lab (F, S) ........ 1 __
- MCB 301 - Molecular Basis of Life (S)* ................. 4 __
- MCB 304 - Molecular Genetics (F)* ...................... 4 __
- MCB 305 - Cell & Developmental Biology (S)* ....... 4 __
  * MCB 301, MCB 304, and MCB 305 must be taken in sequence.

### Education and Communication Sub-Plan

#### Upper Division Elective Courses (18 unit minimum):

### Required Courses (6 units):
- MCB 310- Improving Learning in Science Classrooms (F) ........3 __
- MCB 413 Why is the Grass Green? (F) ..................3 __

#### Choose one of the following courses (3 units):
- EDP 301 Educational Psych. & Child & Adoles. Dev. (F, S, SS) .... 3 __
- EDP 314 Learning in Informal Settings (F, S) .................... 3 __
- JOUR 472 Science Journalism (F) ............................ 3 __

#### Choose one Lab/Research/Internship Requirement (3 units):
- MCB 392/492 Directed Research (F, S, SS) ............ 3 __
- MCB 399/499 Independent Study (F, S, SS) ............ 3 __
- MCB 473 Recombinant DNA (S) ........................... 3 __

#### Choose additional required elective courses (6 units):
- Choose upper division electives to meet requirement - see back of checklist for elective options.
  - Writing Emphasis Elective ........................................... 3 __
  - Upper Division MCB Elective: ................................. 3 __

### SUPPORTING COURSEWORK REQUIRED FOR SUB-PLAN

### UNIVERSITY REQUIREMENTS:
- 120 total units □
- 42 upper division units □
- 2.000+ cum GPA □
- 2.000+ major GPA □
- MCWA complete ___
- Final 18 of 30 units complete ___
- 30+ total units at UA ___
- 18+ MCB units at UA ___
- <60 correspondence/UA exam units ___
Education and Communication Sub-Plan Upper Division Elective Courses:

**Choose one Writing Emphasis Elective (3 unit min.):**
- MCB 404 Bioethics – 3 units (F, S, SS)
- MCB 422 Problem Solving with Genetic Tools – 3 units (F, SS)
- MCB 473 Recombinant DNA Methods and Applications – 4 units (S)*
- MCB 498 Senior Capstone – 3 units (F, S)
- MCB 498H Senior Honors Thesis – 3 units (F, S)
- ECOL 379 Evidence Based Medicine – 3 units (S)

**Choose one MCB Elective (3 unit min.):**
- MCB 315 Quantitative Biology – 3 units (F, even years only)
- MCB 325 Biology of Cancer – 3 units (F)
- MCB 422 Problem Solving w/ Genetic Tools – 3 units (F, SS)
- MCB 425 Cancer Discoveries – 3 units (S)
- MCB 442 Human Genetics: Sex, Crime, and Disease – 3 units (S)
- MCB 447 Big Data in Molecular Biology and Medicine – 3 units (F, odd years only)
- MCB 480 Introduction to Systems Biology – 3 units (F)
- MCB 482 Modeling Human Disease – 3 units (S)

* cannot be used to fulfill two sub-plan requirements

Course offerings are subject to change. Please consult the Schedule of Classes for specific semester course information.